

RULE 132 DECLARATION

In re application:
Hiroshi Dairiki et al.
Application No. 10/523,106
Application Filed: August 6, 2003
For: AGRICULTURAL CHEMICAL COMPOSITION IN GRANULAR FORM

DECLARATION UNDER 37 CFR 1. 132

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Randolph Building
401 Dulany Street
Alexandria, Virginia 22314

Sir:

I, Tetsutaro Kai, am a researcher in the field of agrochemical formulation. I am a Japanese citizen, and I hereby declare and state that I have technical knowledge relating to the subject application.

I declare that I received a graduate degree as Master of Engineering in March, 2002, from the Graduate School of Ehime University.

I also declare that I have been employed by NIPPON SODA CO., LTD., the Assignee of this application, since 2002 and that I am presently working as a researcher for Odawara Research Center of the Assignee, Odawara-city, Kanagawa prefecture, Japan.

I further declare that I have read the entire contents of the Office Action issued on April 2, 2009 against the above patent application, and that I have read and am familiar with the references cited in the Office Action by the Examiner.

I declare further that I conducted the following experiment and that the test results are true and correct to the best of my knowledge.

I understand that in amended Claim 1 of the subject application, "potassium chloride" has been recited as an indispensable component of the claimed granulated pesticidal composition.

To further indicate the effect of potassium chloride on dispersibility of granulated pesticidal compositions, I further indicate the following experimental results.

The granulated compositions indicated in Table 1 (Samples 1 to 4) were prepared and assessed the dispersibility thereof in the same manner as that stated in the previous declaration dated June 19, 2008. Samples 1 and 2 in Table 1 are the same as Samples 1 and 2 indicated in the previous declaration.

(1) Self-dispersibility:

Self-dispersibility was confirmed in Samples 1 and 2. The granules of Sample 1 started to disperse more rapidly in the water column than did Sample 2. On the other hand, self-dispersibility did not occur in Samples 3 and 4.

(2) Number of tube inversions required for dispersion in water:

The granules of Sample 1 were completely dispersed by 3 to 5 inversions, while other samples required 10 inversions or more.

(3) Sediment volume:

After completion of the assessment described above, the tubes were repeatedly inversed an additional 30 times at a rate of once per 2 seconds, and then the volume of sediment formed after 30 minutes was measured. Only a trace amount of sediment was formed in the test tube of Sample 1, while sediment (0.01 to 0.1 mL) was formed in the test tube of the other samples.

The results of the assessment stated above are summarized in Table 2.

Table 1

Ingredients	Trade name	Sample 1	Sample 2	Sample 3	Sample 4
Cyflufenamid	-	3.7	3.7	3.7	3.7
Triflumizole	-	16.6	16.6	16.6	16.6
Sodium dodecyl benzenesulfonate	LUNOX P-65L	0.35	0.35	0.35	0.35
Sodium lignosulfonate (degree of sulfonation: 4.7)	REAX 100M	5.25	-	5.25	-
Sodium lignosulfonate (degree of sulfonation: 0.5)	POLYFON-H	-	5.25	-	5.25
Polyethylene (polymerization degree: 9) tristyrylphenyl ether sulfate ammonium salt	TPP-08011	3.5	3.5	3.5	3.5
Anhydrous sodium sulfate	-	0.15	0.15	0.15	0.15
Urea	-	1	1	1	1
Potassium chloride	-	10	10	-	-
Clay	Crown Clay	59.45	59.45	69.45	69.45

(given in percentage by weight)

Table 2

	Sample 1	Sample 2	Sample 3	Sample 4
Self-dispersibility	Rapid dispersing	Slow dispersing	Not dispersing without tube inversions	Not dispersing without tube inversions
Number of tube inversions required for dispersion in water	3 to 5	> 20	9 to 10	13 to 15
Sediment volume	trace	0.1 ml	0.01 ml	0.1 ml

Among the samples indicated above, Sample 1 is a granulated composition of the subject invention, while Samples 2 to 4 are comparative examples. The effect of potassium chloride on dispersibility of granulated pesticidal compositions can be confirmed by comparing Sample 1 with Sample 3. Namely, the composition of Sample 1 has excellent properties of self-dispersibility, while self-dispersibility was not observed in Sample 3. Further, the properties of Sample 1 are superior to those of Sample 3 in other assessments: number of tube inversions required for dispersion in water and sediment volume.

I believe that the experimental results indicate the significant effect of the subject invention, which could not be expected even by a person skilled in the art, and therefore that the claimed invention of the subject application is not obvious over the cited prior art.

I declare further that all statements made herein of my own knowledge are true and that all statements made on the basis of information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Date

July 14, 2009

Tetsutaro Kai

Tetsutaro Kai